



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
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Seattle, Washington 98101

WA 2302
4-14-99
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Reply To
Attn Of: OEA-095

April 14, 1999

MEMORANDUM

SUBJECT: Comparison of EPA Comments with Rhone-Poulenc Responses

FROM: Marcia Bailey, D.Env. *Marcia Bailey*
Office of Environmental Assessment

TO: Christy Brown
Office of Waste and Chemicals Management

The following are issues which were specifically commented on in EPA's December 1998's transmittal to R-P and which I believe were not addressed or not sufficiently addressed in the recent re-submittal. The items are numbered per the responses from R-P.

General Comments

1. The comment directed R-P to emphasize ecological risks as much as human health. Ecological risks are discussed in Chapter 6.0, which is one and one-half pages long. Ecological risks are addressed for aquatic receptors by comparing groundwater constituent concentrations with surface water criteria for the more conservative of ecological or human health criteria. However, ecological receptors to soil and sediment contamination and to potentially affected aquatic organisms are not sufficiently addressed. Ecological onsite habitat and receptors are qualitatively discussed in one paragraph on page 32. Since the human health exposure assessment cites contaminated soil as a complete or potentially complete exposure pathway, it must also be a potentially complete pathway for ecological habitat and receptors. A quantitative ecological risk assessment is necessary for the RA/MCS to be acceptable and for soil and sediment cleanup standards to be established.

3. Our comment (in part) was: "The RA should include a list of constituents for which detection limits were never sufficiently low for comparison with...human health and ecological screening levels." The response to the comment is confusing and alarming. The response (in part) was: "In some cases, screening levels were sufficiently low that it is unlikely they could be achieved by standard analytical methods. For groundwater screening levels based on surface water protection, several constituents were not-detected at detection limits higher than the most stringent screening criteria. *In cases where it is unlikely that such stringent screening levels could be achieved, screening results were based on professional judgement as to whether detection limits could be achieved by standard analytical methods.*" [Emphasis added.]

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It is unclear how or if or where "professional judgement" was used in the RA/MCS to determine screening results. Risk-based criteria or promulgated standards should be compared with constituent concentrations, and if the constituents are undetected above the screening levels, they should be retained in the risk assessment, with the method detection limit assumed to be the concentration. The company should explain its response to General Comment 3 and should also specifically explain the screening process used, particularly in terms of any "professional judgement" that was used in the process.

5. Our comment was: "The RA should be revised to include any analytical data which have been generated from sample collection since the RA was drafted, excluding the March 1998 ground water sampling data." The response was: "This report was prepared using site data made available to AGI in an electronic database prepared by others." This is unresponsive. On page 3 of the re-submitted RA/MCS, it is stated the data collected for three rounds of sampling during the RFI were considered. Only Round 3 data were used for inorganics in ground water, but on page 4, it states that Round 3 samples were taken in March 1995. The response should either state that no other sampling has been conducted, or if it has, the data should have been identified and included.

6. Our comment requested a definition of action levels, stating it was unclear in the RA. The response was that "definitions have been provided in Section 2.1." I feel the definitions of RFI Action Level, COPCs, COIs, and screening are all confusing at times throughout Chapter 2. For example, on page 3, action levels are defined as "promulgated standards or criteria used as trigger mechanisms for the RA/MCS evaluation." Along with that definition should be a table which provides those "promulgated standards or criteria" which were used. It appears that for soil, this would be Table 2.4, and if so, it should be cited as such here. It does state on page 8 that the soil RFI Action Level is the MTCA Method C cleanup level for industrial soil. This should be stated on page 3 with definitions. The definitions of RFI action levels, COPCs and COIs is confusing for groundwater, as delineated in my comments on the revised RA/MCS. These should be straightforward definitions.

7. We requested that where Region 9 PRGs are used for screening purposes, that a hazard quotient of 0.1 be applied, instead of 1.0 as in the PRG table. This was done in the revised RA/MCS for soil, but not for air.

Specific Comments

6. Our comment (in part) was: "The RA must provide evidence of values for constituents which were consistently below detection limits, relative to their risk-based action or screening levels; *and must describe their relevance in terms of uncertainty for the purposes of characterizing risk.*" [Emphasis added.] Neither the response letter nor the revised RA/MCS discusses uncertainty as it relates to this issue and to the characterization of overall risk. The chapter on uncertainty analysis (which is very important in a risk assessment) was highly incomplete, as pointed out in my comments on the revised RA/MCS.

17. Our comment was to request that the results of exposure to particulates be summarized in the air sampling section. The response pointed out that air sampling did not include exposure to particulates. It went on to say that potential exposure to particulates is addressed in the exposure section, and is included in the development of risk-based concentrations for soil. As pointed out in my comments on the revised RA/MCS, it appears that only volatiles were included in the equations for soil RBCs,

although this is not conclusive. In any case, the text does not make clear if particulates were included in equations, and if so, how PEFs were determined.

22. Our comment asked for it to be stipulated as to whether constituent levels were compared with MTCA or with Region 9 PRGs, and asked for the sources of action levels for chrysene and pentachlorophenol. The response simply stated that "groundwater screening criteria are presented in Section 2.3.1 of the revised report", and that "definitions for "action levels" and other terms are presented in Section 2.1." As pointed out above, the definitions are inadequate in the revised RA/MCS, and the specific questions posed in our comment were not answered.

29. Our comment requested that the text be revised to "more completely state what criteria/standards the constituents were compared with for purposes of establishing COIs."

The response: "Groundwater screening criteria are presented in Section 2.3.1." As discussed at some length in the comments on the revised RA/MCS, it is very difficult to tell whether the discussion of screening of groundwater constituents was to determine COPCs or COIs, or both. The discussion needs to be revised to make it clear to the reader what the process was.

31. Our comment (in part) was: "Human health and ecological health values should be compared with the concentrations in the affected perimeter wells." The response did not address this, and the revised RA/MCS uses concentrations from wells throughout the site. The Respondents had previously been provided a letter from EPA citing guidance for the use of affected perimeter wells and the calculation of an arithmetic mean (based on the 95th percentile upper confidence limit) to establish a point of exposure concentration term.